

### Remarks

In the Final Office Action, claims 12, 14-33, and 63 were rejected; and claims 14-25 were objected, but are allowable if rewritten in independent form. Various claims are amended and claim 12 is cancelled without prejudice, in response to the Final Office Action, taking in to consideration the discussion during the Examiner Interview and the additional comments in the Advisory Action. No new matter is added. Claims 14-33 and 63 are now pending.

### *Examiner Interview*

The Examiner is thanked for conducting the telephonic Examiner Interview with attorney Brian Leggett on February 3, 2011. Although no agreement was reached during the course of the telephonic interview, it is believed that the Examiner's input will be useful in furthering prosecution.

The final Office Action dated December 30, 2010 indicated that claims 14-25 would be allowable if rewritten in independent form including all recitations of the base claims and any intervening claims. But in the Interview Summary mailed on February 7, 2011, the Examiner indicated that he no longer considered claims 14-25 to be in a condition for allowance. Although the Interview Summary describes various alleged issues with claims 14-25 (for example that some of these claims recite steps "with no clear inter-relationship"), the Interview Summary does not indicate a legal basis for rejecting claims 14-25. For example, there is no indication as to whether there are alleged grounds for rejecting one or more of claims 14-25 under § 112, first or second paragraph. There is also no indication as to whether there are alleged grounds for rejecting one or more of claims 14-25 under § 102 or § 103 for an alleged lack of novelty or non-obviousness.

The present response amends claim 14 to be both in independent form and to include all recitations from claim 12 (the base claim). As noted above, the final Office Action of December 30, 2010 indicated that so amending claim 14 would place claim 14 into a condition for allowance. Although the difficulty of reviewing the subject matter of the present application is appreciated, it is nevertheless respectfully requested that the Examiner either issue a notice of allowance or issue a new Office Action indicating one or more legal

and factual bases for rejecting claims 14-25. It is noted herein that MPEP 2106 provides (emphasis ours):

**It is essential that patent applicants obtain a prompt yet complete examination of their applications. Under the principles of compact prosecution, *each claim should be reviewed for compliance with every statutory requirement for patentability in the initial review of the application, even if one or more claims are found to be deficient with respect to some statutory requirement.* Thus, USPTO personnel should state all reasons and bases for rejecting claims in the first Office action. Deficiencies should be explained clearly, particularly when they serve as a basis for a rejection. Whenever practicable, USPTO personnel should indicate how rejections may be overcome and how problems may be resolved. *A failure to follow this approach can lead to unnecessary delays in the prosecution of the application.***

*Claim Rejections – 35 U.S.C. § 112*

Claim 63 was rejected under 35 U.S.C. § 112, first paragraph, for allegedly lacking written support in the specification. The present Office Action alleged that the following recitation from claim 63 is not adequately described by the Detailed Description in a way that conveys to one of ordinary skill that the applicant was in possession of the claimed subject matter: “determining a relative delay among possible paths through the common subgraph.” Page 3 of the present Office Action alleged (in part, emphasis omitted):

“No where is there description as to how a ‘relative delay’ is determined among possible paths through the common subgraph ... As claim 63 does not correlate DFG, common subgraph with relative delay and/or longest delay path, one would recognize that the inventor is not in possession of “relative delay” and a heuristic using relative delay or branch-and-bound that particularly addresses or implicates all possible “paths through the common subgraph” as claimed. It is not clear how the invention would teach one skill in the art for make use of branch-and-bound (with relative delays paths determination approach) scheduling as disclosed to make it applicable to all possible paths through or relatively delayed with respect to LSCG (longest common subgraph) or ‘common sub-expression’, as this would require undue experimentation. Therefore the requirement recited as ‘for less than all possible paths through the common subgraph’ (for branch-and-bound relative delay) will not be given patentable merit; and will be treated as ‘for all possible paths including at least a longest/relative delay.’”

As best understood herein, the Office Action alleged that there is no support in the Detailed Description of the present application for using branch-and-bound scheduling in

conjunction with “determining a relative delay among possible paths through the common subgraph.” It is submitted herein that the “proposed approach” on page 48 of the Detailed Description provides adequate support for the objected-to recitation. In particular, this portion of the Detailed Descriptions states (in part, emphasis ours):

“i. Use known Partial Critical Path (PCP) scheduling to **determine the delays for each possible path of the CDFG** and arrange the list of paths in descending order of the delays;

“ii. Perform **branch and bound based scheduling** (which need not be done for every path to reduce the complexity);

iii. Once the final list of all schedules is ready, merge all the schedules by respecting data and resource dependencies”

It is submitted herein that at least this portion of the Detailed Description teaches performing branch-and-bound scheduling in conjunction with “possible paths through the common subgraph” in conjunction with relative delay. As to the allegation that the applicant was not in possession of “relative delay,” it is submitted herein that “Scheduling to determine the delays for each possible path of the CDFG” shows that the applicants were in possession of “relative delays” (by determining delays for all paths through a CDFG, one has by definition determined the paths’ relative delays). Thus, it is submitted that the Detailed Description teaches the recitations of claim 63. Withdrawal of the rejection of claim 63 under § 112, first paragraph is respectfully requested.

#### *Claim Rejections – 35 U.S.C. § 103*

Claims 12, 27-29, and 32-33 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Okada (U.S. Pat. App. Pub. No. 2001/0016936) in view of Hammes et al. (U.S. Pat. No. 7,155,708). Claims 30 and 31 were rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Okada in view of Hammes, in view of pages 8-10 of the Specification (“Admitted Prior Art”), and in further view of Bertolet (U.S. Pat. no. 5,671,432). Claim 63 was rejected 35 U.S.C. § 103(a) as being allegedly unpatentable over Okada in view of Hammes, and in further view of Cheng et al. (“High-Level Synthesis: Current Status and Future Prospects”).

In order to expedite prosecution, claim 12 has been canceled herein without prejudice, thereby rendering its rejection moot. Claims 27-33 and 63 are amended herein to depend from claim 14, which was indicated in the present Office Action to be allowable if rewritten in independent form. Because claim 14 has been so rewritten, it is submitted that claims 27-33 and 63 are in a condition for allowance.

*Allowable Subject Matter*

Claims 14-25 were objected to for being allowable but for their dependence on a rejected base claim. As noted above, claim 14 has been amended to be in independent form and to incorporate all subject matter of its base claim (claim 12). Claims 15-25 remain dependent – either directly or indirectly – on claim 14. Thus a Notice of Allowance is respectfully requested.

*Telephonic Interview of December 14, 2010*

The Examiner is thanked for telephoning attorney Brian Leggett on December 14, 2010.

*Response to Arguments*

The Examiner is thanked for considering the amendments and remarks filed on October 25, 2010.

### Conclusion

In view of the foregoing, favorable consideration and a Notice of Allowance are earnestly solicited. The Examiner is invited to telephone the undersigned representative at (206) 381-8819 if the Examiner has any questions concerning the present paper, or believes that an interview might be useful for any reason.

It is not believed that extensions of time are required beyond those that may otherwise be provided for in documents accompanying this paper. However, if additional extensions of time are necessary to prevent abandonment of this application, then such extensions of time are hereby petitioned under 37 C.F.R. § 1.136(a).

If any fees are due in connection with filing this paper, the Commissioner is authorized to charge the Deposit Account of Schwabe, Williamson and Wyatt, P.C., No. 50-0393.

Respectfully submitted,  
SCHWABE, WILLIAMSON & WYATT, P.C.

Date: March 30, 2011

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Reg. No.: 35,432